

17. (AS NEW) The X-ray device of claim 1, wherein the X-ray source and X-ray detector are mounted on the common holding device by a displacement device such that the X-ray source and X-ray detector can be displaced along an axis.

18. (AS NEW) The X-ray device of claim 2, wherein the supporting device is a 6-axes flexible arm.

19. (AS NEW) The X-ray device of claim 1, wherein the supporting device is connected to the room at a connection point by a rotational hinge that permits rotation about an axis that extends perpendicularly out from the connection point.

20. (AS NEW) The X-ray device of claim 1, wherein each of the hinges permits rotation about a horizontal axis of the hinge.

REMARKS

In the Office Action mailed on March 6, 2002, claims 1-5 and 7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Rattner (U.S. Patent No. 6,213,638 B1) ("Rattner I"); claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Rattner I in view of Holmstrom (U.S. Patent No. 3,784,837); and claims 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rattner I in view of Travanty et al. (U.S. Patent No. 4,987,583) ("Travanty") and Rattner (U.S. Patent No. 5,285,772) ("Rattner II"). The foregoing rejections are respectfully traversed.

Claims 1-20 are pending in the subject application, of which claim 1 is an independent claim. Claims 2-20 depend, directly or indirectly, from claim 1. Claims 1, 3, and 5 are amended herein and claims 11-20 are added. Care has been exercised to avoid the introduction of new matter. A Version With Markings To Show Changes Made to the amended claims is included herewith.

Claim Amendments:

Claim 1 has been amended herein to improve clarity. Claim 1 has been further amended herein to recite that the "hinges connecting the supporting members are plane hinges" and "the position of the common holding device is changed in a plane defined by the

supporting members.” Support for the amendment to claim 1 can be found at page 4, lines 18-20 of the Specification. Claim 3 has been amended herein to improve clarity. Claim 5 has been amended herein to recite that the hinge “permits rotation 360 degrees about an axis.” Support for the amendment to claim 5 can be found at page 4, line 16 of the Specification. The Applicants respectfully request that the Examiner enter the amendments.

Claim 8:

In the Amendment filed on December 15, 2001, the clean version of claim 8 therein was correct. However, the marked-up version of claim 8 did not indicate that the word “that” of the phrase “characterized in that” was to be deleted. Therefore, the correct version of claim 8 as a result of the Amendment filed on December 15, 2001 is presented in the clean version of claim 8 as recited in that Amendment.

Rejection Under 35 U.S.C. § 102(e):

Rattner I discloses a medical device having a device component that is connected to a mount and that carries an X-ray source and an X-ray receiver, the mount having elements that can be moved relative to one another in a motorized fashion, where the device component moves along defined lines in space in a motorized fashion, at least indirectly, using the mount (Rattner I, col. 1, line 66 – col. 2, line 9).

In contrast, claim 1 of the subject application (as amended herein) recites that “the hinges connecting the supporting members are *plane* hinges, and ... the position of the common holding device is changed in a plane defined by the supporting members” (emphasis added). In Rattner I, the elements 7 of articulated arm 5 are connected via joints 8 (Rattner I, col. 4, lines 5-6). Each of the joints 8 permit rotation about an axis A, all of the axes A being parallel to one another (Rattner I, col. 4, lines 14-16; Figure 1). However, in Rattner I, the elements 7 are positioned such that they cannot all rotate in the same plane (Rattner I, Figure 1). For example, the first two elements 7 are connected to joints 8 at either end in such a manner that each element does not extend perpendicularly out from each axis A (Rattner I, Figure 1). By extending out from each axis A at an angle other than 90 degrees, each of those elements 7 will not rotate in a plane, but will rotate in a three-dimensional space defined by the surface of a cone. In contrast, the supporting elements in claim 1 all rotate in and define a plane in which the common holding device is positioned (assuming for purposes of discussion

that the common holding device is positionally represented by its point of connection to the supporting device). Therefore, claim 1 is not anticipated by Rattner I.

Further, Rattner I does not suggest another configuration of elements 7 that would render claim 1 obvious.

Claims 2-5 and 7 are allowable based on their dependency, directly or indirectly, from deemed allowable claim 1. Therefore, the Applicants respectfully request that the Examiner withdraw the rejection.

Rejection Under 35 U.S.C. § 103(a):

The remarks set forth above are incorporated as if fully set forth herein. Based on the deemed allowability of claim 1 (as amended herein), the Applicants respectfully refrain from substantively arguing the section 103(a) rejections. Claims 6 and 8-10 are allowable based on their dependency, directly or indirectly, from deemed allowable claim 1.

If the Examiner maintains the rejection to claim 1, the Applicant asserts that it is improper to combine Rattner I with any of Holmstrom, Travanty, and Rattner II. MPEP §2142 states that "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." The Examiner is required to present actual evidence and make particular findings related to the motivation to combine the teachings of the references. In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); In re Dembiczak, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." Dembiczak, 50 USPQ2d at 1617. The factual inquiry regarding whether to combine the references must be based on objective evidence of record, and cannot be based on subjective belief and unknown authority. In re Lee, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002). The Examiner must explain the reasons that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998). Although the Examiner stated that motivation to combine exists, that is a mere conclusory statement, and as such, is not adequate. Therefore, the Applicant respectfully requests that the Examiner withdraw the section 103 rejections.

New claims:

New claims 11-20 are added. Support for claim 11 can be found on page 2, lines 10-13 of the Specification. Support for claim 12 can be found on page 2, lines 24-25 of the Specification. Support for claim 13 can be found on page 3, lines 4-6 of the Specification. Support for claim 14 can be found on page 3, lines 13-15 of the Specification. Support for claim 15 can be found on page 3, lines 20-22 of the Specification. Support for claim 16 can be found on page 3, lines 22-25. Support for claim 17 can be found on page 4, lines 27-29 of the Specification. Support for claim 18 can be found on page 5, lines 13-15 of the Specification. Support for claim 19 can be found on page 4, lines 9-10. Support for claim 20 can be found in Figure 2 of the Specification.

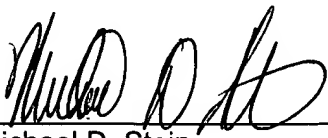
Claims 11-20 are allowable based on their dependency, directly or indirectly, from deemed allowable claim 1. The Applicants respectfully request that the Examiner enter the new claims.

Withdrawal of the foregoing rejections is respectfully requested. There being no further objections or rejections, it is submitted that the application is in condition for allowance, which action is courteously requested. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 5/30/02

By: 
Michael D. Stein
Registration No. 37,240

700 Eleventh Street, NW, Suite 500
Washington, D.C. 20001
(202) 434-1500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

1. (TWICE AMENDED) An X-ray device provided with an X-ray source and an X-ray detector which are mounted at [a respective end] different ends of a common holding device, the common holding device being connected to [the] a room by way of a supporting device,

wherein the supporting device [is composed of] comprises a plurality of hinged, serially interconnected supporting members, wherein the hinges connecting the supporting members are plane hinges, and wherein the position of the common holding device is changed in a plane defined by the supporting members.

3. (TWICE AMENDED) An X-ray device as claimed in claim 1, wherein the supporting device is constructed and connected to the holding device in such a manner that the common holding device with the X-ray source and the X-ray detector can be positioned completely as desired.

5. (TWICE AMENDED) An X-ray device as claimed in claim 1, wherein the supporting device is connected to the holding device by way of a hinge that permits rotation 360 degrees about an axis.

Please ADD the following NEW claims:

11. (NEW) The X-ray device of claim 1, wherein the common holding device is rigid, such that the distance between the X-ray source and the X-ray detector and the orientation of both elements relative to one another are invariable.

12. (NEW) The X-ray device of claim 2, wherein the serial manipulator is controlled by software.

13. (NEW) The X-ray device of claim 6, wherein the distance between the X-ray source and the X-ray detector can be changed.

14. (NEW) The X-ray device of claim 8, wherein emergency braking is initiated when the distance between the moving parts and the object to be examined falls below a safety threshold.

15. (NEW) The X-ray device of claim 10, wherein the mechanical contact sensors produce a signal upon contact with the object to be examined.

16. (NEW) The X-ray device of claim 8, wherein the means for monitoring the distance include a separate video system to continuously monitor the motion of the X-ray source and the X-ray detector.

17. (NEW) The X-ray device of claim 1, wherein the X-ray source and X-ray detector are mounted on the common holding device by a displacement device such that the X-ray source and X-ray detector can be displaced along an axis.

18. (NEW) The X-ray device of claim 2, wherein the supporting device is a 6-axes flexible arm.

19. (NEW) The X-ray device of claim 1, wherein the supporting device is connected to the room at a connection point by a rotational hinge that permits rotation about an axis that extends perpendicularly out from the connection point.

20. (NEW) The X-ray device of claim 1, wherein each of the hinges [permit] permits rotation about a horizontal axis of the hinge.